Exhibit H

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA
CHARLESTON DIVISION

IN RE: ETHICON, INC., PELVIC REPAIR SYSTEM PRODUCTS LIABILITY LITIGATION	MASTER FILE NO. 2:12-MD-02327 MDL 2327 JOSEPH R. GOODWIN U.S. DISTRICT JUDGE

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CYNTHIA JOHNSON	PLAINTIFF
VS.	CASE NO.: 2:12-cv-01704
ETHICON, INC., ET AL.	DEFENDANTS

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DEPOSITION OF SHELBY F. THAMES, PhD

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Taken at Butler Snow
1020 Highland Colony Parkway, Suite 1400,
Ridgeland, Mississippi
On Tuesday, July 19, 2016,
Beginning at approximately 4:31 p.m.

****

AMY M. KEY, RPR, CSR
Notary Public

A P P E A R A N C E S

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E X H I B I T S

(No Exhibits Marked.)

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S T I P U L A T I O N

It is hereby stipulated and agreed by respective attorneys of record, that this deposition may be taken at the time and place hereinbefore set forth, by AMY M. KEY, Court Reporter and Notary Public, pursuant to the Rules;

That the formality of reading and signing is specifically RESERVED;

That all objections, except as to the form of the questions and the responsiveness of the answers, are reserved until such time as the deposition, or any part thereof, may be used or sought to be used in evidence.

SHELBY F. THAMES, PhD,

having been first duly sworn,

was examined and testified as follows:

EXAMINATION

BY MR. BOWMAN:

Q. So, Doctor, we met before. My name is Michael Bowman. We're here to talk about your case-specific report for Cynthia Johnson.

A. Yes, sir.

Q. Do you have the report in front of you now?

A. I do.

Q. And do you mind if I take a look real quick?

A. No, sir.

Q. Okay. So, Dr. Thames, you have the report you submitted for Ms. Johnson's case in front of you?

A. Yes, sir.

Q. And am I to understand that you examined some mesh that was explanted from Ms. Johnson?

A. Yes, sir.

Q. And was this mesh collected by Kevin Ong per protocols that have already been formed according to this litigation?

A. Yes, sir.

Q. Is it your understanding that he and plaintiff's counsel -- or he and the expert for plaintiff's counsel divided the mesh evenly and then each went their separate ways?

A. As evenly as possible, yes, sir.

Q. And did you receive one piece of mesh, do you know, for Ms. Johnson's case?

A. I received three pieces.

Q. And did you run all three pieces through the cleaning protocol described on page 2?

A. Yes, sir, I did.

Q. And there are six steps in this 23-step cleaning protocol where you, yourself, received the mesh after it had been dried and desiccated and then you ran a chemical polymer analysis on it; is that correct?

A. I did, a structural and polymer analysis.

Q. So you did FTIR?

A. (Witness nods head affirmatively.)

Q. SEMs?

A. Yes, sir.

Q. And what was the third thing you did?

A. Light microscopy.

Q. Light microscopy?

A. LM. We refer to it as LM.

Q. And you did that for all three pieces of mesh that you were given from Cynthia Johnson; is that correct?

A. Yes, sir.

Q. Is it your understanding that all three pieces of mesh -- well, what is your understanding of the kinds of mesh that were explanted from Ms. Johnson?

A. Well, one was a Gynecare Prolift material, the other was a Gynecare TVT tension-free support for a stress urinary incontinence, as noted in Dr. Ong's information.

Q. What about the third one?

A. That's all we have here. I'm not sure where the third one came from. It may be two pieces of the same material. I'll have to take a look at it.

Q. It indicates they all have --

A. Yes, sir, we're talking about the same material.

Q. And as far as your analysis goes you did on Ms. Johnson's case, you were evaluating it as if all the mesh itself was Prolene, correct?

A. That is correct.

Q. And you didn't deviate -- as far as you know, you didn't deviate and Dr. Ong didn't deviate from the steps listed on page 2 of your general export report?

A. That is correct.

Q. And with respect to the opinions offered for Ms. Johnson's case, did you perform a control using oxidized Prolene and run them through the steps that are detailed on page 2 of your report?

A. No, sir, that was not necessary.

Q. Specifically, you didn't run a control of Prolene in distilled water at 80 degrees Celsius, correct?

A. Yes, we did.

Q. You did?

A. We carried an exemplar through all the steps.

Q. I asked the wrong question, didn't I, Doctor? The question I meant to ask was, did you run a control of oxidized -- purposely oxidized Prolene in the step for distilled water at 80 degrees Celsius for 20 hours?

A. I didn't use intentionally oxidized Prolene. There was no need for that in this system. To get the information that I needed to make my

determinations, there was no need to do that.

Q. And then the next step is sodium hypochlorite and the shaker. You didn't run a control of oxidized Prolene through that step?

A. Same answer.

Q. And the same question I could ask for every single step involved here. You did not --

A. Same answer.

Q. Okay. Thank you.

Is it your testimony that you don't believe that any of the steps that you used in your cleaning protocol would have altered or affected the presence of oxidized Prolene on Ms. Johnson's explanted mesh?

A. If it were present, absolutely, it would not have affected it in any way.

Q. And did you perform any kind of tensile mechanical testing on the mesh that was explanted from Ms. Johnson?

A. No, sir. That requires a great deal of mesh, and there was simply no way that could be done, physically impossible.

Q. You didn't even try it in Ms. Johnson's case?

A. Sir, we had very small amounts of

material. You couldn't make one pull on a tensile material with anything. There was no way that could be done. It was impossible to do with the amount of material that we had. I would love to have done it.

Q. Could you have -- and the reason I ask is this, is that -- I actually asked about mechanical testing, and the reason being is that I wasn't trying to specify just tensile, but I was thinking about pliability. I was thinking about how the material felt in your hand after it had been cleaned. Did you do that?

A. No, sir. I don't give a whole lot of credibility to that since I want specific information and specific data and not -- I didn't have the equipment to do that by virtue of size, as we've talked about here.

Q. Okay.

A. And I guess I would add to that and say you say was it stiff, and I say, well, how stiff? Well, how stiff was it? So everything becomes subjective at that point in time. So that's why I would rather not get involved in that kind of "testing."

Q. It would have been for your own benefit basically. There wouldn't have been any merit to

it?

MR. HUTCHINSON: Object to the form.

THE WITNESS: Well --

MR. BOWMAN: I'll withdraw the question.

MR. HUTCHINSON: All right. That's fine.

BY MR. BOWMAN:

Q. Let me ask you this: Did you find any oxidized Prolene on Ms. Johnson's meshes?

A. No, none of them. None of the three.

Q. And so the three tests -- the three meshes that you examined, you found no evidence of any oxidized Prolene on any of those meshes?

A. No, sir.

Q. And that's based on the testing that you performed and based on the cleaning of the meshes that you had performed as well?

A. And the data that I obtained from the cleaned step-wise meshes.

Q. The data that you, yourself, collected at the analysis was FTIR, SEM and light microscopy, correct?

A. Yes, sir.

Q. For each FTIR that you took, did you choose the same place on the mesh to take an FTIR at

every point in the process?

A. No, sir. That's impossible to do.

Q. For the data that you created when you took the SEM images, did you take the same SEM image at the same spot in the mesh at each separate area where you collected analysis?

A. We didn't intentionally do that, no, sir.

Q. Same with light microscopy, did you do that?

A. That's correct, sir.

Q. You did not do that?

A. No, sir, we didn't intentionally try to do that.

Q. With respect to the FTIR itself, when we're talking about the FTIR, do you know does the FTIR examine the bulk of the material or does it examine -- is it more focused on the surface of the material?

A. Well, it was transmission light, so light went completely through the sample. So I think in your terms, it would be bulk as opposed to the surface.

Surface analysis is done by attenuated total reflectance or ATR. We didn't use that technique.

Q. Okay. With respect to -- and that was for all the FTIR readings that you took on Ms. Johnson's mesh?

A. Yes, sir.

Q. With respect to the data that you collected on the FTIR, you took FTIRs of the mesh before it had undergone anything but the distilled water process of your cleaning process?

A. That's correct.

Q. And you took that FTIR for all three of the meshes you examined?

A. Yes, sir.

Q. And are those represented in figures 12, 13 and 14, respectively?

A. Yes, sir.

Q. And in all --

A. Did you say 15 too, sir?

Q. I did not. I said 13, 14 and 15.

A. Okay. 15. Yes, sir, that's correct.

Q. And in all three of these, you have highlight in the upper right-hand corner of each FTIR where you -- a photograph of where the FTIR was run?

A. That's correct, sir.

Q. And it appears that in each instance

you've been able to find an area of mesh that, even though this was unclean mesh, you could at least visibly tell through the FTIR that you were looking at a monofilament; is that right?

MR. HUTCHINSON: Fiber.

THE WITNESS: Yes. One fiber, yes.

BY MR. BOWMAN:

Q. You identify the fiber as being blue in figure 13, you identify the fiber as being blue in figure 14, and you identify the fiber as being clear in figure 15; is that right?

A. Correct.

Q. And in each one of these, you identify an area where there is a protein Amide I carbonyl stretching, correct?

A. Yes, sir.

Q. And you also identify an area where there is a protein Amide N-H stretching, correct?

A. That is correct.

Q. And you also identify the area where polypropylene shows up on this FTIR as well in all three of these, correct?

A. Yes, sir, I have.

Q. And in none of -- you don't identify any oxidized polypropylene in any of these FTIRs?

A. No, sir.

Q. Do you know if the presence of -- well, I'll strike that.

Well, do you know if the presence of proteins or other kinds of carbonyls can shift the FTIR such that the polypropylene -- the carbonyl and polypropylene isn't going to show up where you expect it to be?

A. No, sir. There may be some shifts occasionally, but they would only be at a very short -- two or three frequency levels, but nothing like you're talking about.

Q. It wouldn't shift to where you -- the oxidized polypropylene wouldn't shift to where you've identified the N-H stretching on the protein Amide?

A. Oh, no.

Q. And the carbonyl, the oxidized polypropylene wouldn't shift to where you've identified protein Amide I carbonyl stretching?

A. What do you mean by wouldn't shift to where I've identified it? It may shift a frequency or two, depending upon, number one, what the protein was; and, number two, what it was associating with in conjunction, which was polar and may be affecting

it chemically. But it would be a very few reciprocal centimeter shift. It wouldn't be a significant shift, as you and I might think.

Q. What would a "significant shift" be?

A. Well, where it might be -- you're talking about completely out of a range, from going from one side of a spectra to another. I specified the shift as a few reciprocal centimeters, and that would depend upon what was associated with what, you know; in other words, what chemical was present with another chemical. So what was the hydrogen bonding? What was the polarity?

Q. But the presence of other hydrogen and carbonyl bonding wouldn't shift the carbonyl bond on a piece of polypropylene?

A. No, sir.

Q. And the same is true about an O-H group?

A. I wouldn't think so, no, sir.

Q. So the fact that you don't identify any polypropylene oxidation here, either through the O-H group or the carbonyl group, that is essentially definitive that there was none on the mesh that you examined; is that right?

A. Yes, sir.

Q. Because this is in the prewashed. This is

in pretreated polypropylene?

A. Yes, sir.

Q. And how far do you think that carbonyl could move, could be shifted based on what else -- the other aspects of what was in the FTIR?

A. A few reciprocal centimeters, and that's an estimate.

Q. Could it be shifted -- okay. So a few reciprocal centimeters I'm not sure I understand.

A. Well, I'll show you what they are. In other words, if you look at this on figure 16, you notice you go between 2000 and 2200. Well, that's 200 reciprocal centimeters.

Q. Okay.

A. And I'm talking about a few.

Q. You're talking about five to ten?

A. Or less than five.

Q. So some layers have said that they shift up to 80.

A. I have never experienced that, sir.

Q. Before you worked -- well, have you ever experienced that before you did the work you did on Ms. Johnson's case?

A. No, sir, never in 50 years.

Q. Have you researched peer-reviewed

literature specifically looking for carbonyl shifts or O-H shifts on polypropylene?

A. No, not for this. It would be a waste of time.

Q. Would it surprise you if it exists?

A. I think I've told you that there may be a few reciprocal centimeters, haven't I?

Q. You did.

A. Okay. Well, that's my answer.

Q. Thank you.

And if we look at figure 16, this is the before cleaning of the Johnson mesh and you've overlaid it with the collagenase type VII high purity; is that right?

A. That is Johnson 6.1 before cleaning, and this is of the tissue between the fibers. That is the blue, and the red is the collagenase sample, which is the control-type spectra to show that this is absolutely proteins that we're looking at here.

Q. But this was -- this isn't representative of any of the FTIRs you took in figures 13, 14 and 15, correct?

A. Are you saying this is not representative of it?

Q. Well, that's my question, yes.

A. Well, certainly it's representative. It shows you that the absorption frequencies for the N-H bond is in the range of 3300 reciprocal centimeters and for the carbonyl stretching frequency that we've been talking about.

Q. But in figure 16, you show collagenase in the background. And in the foreground there is the before cleaning tissue and fibers. So this is an FTIR of the tissue and fibers, correct?

MR. HUTCHINSON: Object to form.

THE WITNESS: This is an FTIR of exactly what it says, the tissue between the fibers.

BY MR. BOWMAN:

Q. So my question is this: Do you see how this photograph is here, if you took the --

A. Which one is that, sir?

Q. That's figure 13.

A. 13?

Q. Yes. Figure 13, 14 and 15, they all have that photograph in the upper right-hand corner of the FTIR.

A. Yes, sir.

Q. So that is what appears to be a fiber, correct? That's where it is?

A. That's correct.

Q. For figure 16, there is no photograph provided, but the description is of tissue and -- tissue between fibers?

A. Correct.

Q. So this is an FTIR of the tissue between the fibers, and it's not of the fibers themselves?

A. To show you that tissue we've been talking about all day is protein.

Q. Okay. Thank you. It's specifically -- thank you. I'll withdraw it.

And then it appears you did the same thing in figure 17 for tissue between the fibers, but this time you overlaid it with the before cleaning of the clear fiber; is that right?

A. Correct.

Q. And there are differences between those. They don't wind up exactly?

A. Well, they're different because they are different concentrations, different amounts of light was able to get through the sample. But they had the important spectral components that we've been talking about, the 3300 and the carbonyl frequencies and so forth.

Q. And the 3300 is where you assign the N-H groups, correct?

A. That's where it's assigned in the chemical literature.

Q. But isn't that also where the O-H groups for oxidized polypropylenes --

A. In that range.

Q. And with respect to the carbonyl group -- I'm sorry. With respect to this carbonyl group, this is the area where you've assigned the Amide I carbonyl?

A. Yes, sir.

Q. And there is no -- as far as you know, there is no oxidized polypropylene showing on this FTIR?

A. That's correct, sir.

Q. Okay. Thank you. Then in figure 18 and figure 19 --

A. Yes, sir.

Q. -- and it looks like figure 20 and 21, 22 and 23 you are showing the FTIR that you've taken an overlay of each fiber over the course of the five cleaning steps; is that correct?

A. Yes, sir.

Q. And it shows that the cleaning process was successful in removing what you've identified as the Amide group carbonyl and the Amide group N-H; is

that right?

A. Protein absorption, yes, sir, that are characteristic.

Q. And it shows that in all of these, correct?

A. That is correct, sir. It shows something else too that is very important.

Q. What is that?

A. There is no carbonyl oxidation of Prolene shown here.

Q. You did not find any carbonyl oxidation of Prolene in this FTIR?

A. No, sir, none.

Q. Did you take into account in making the determination the presence of -- I'm sorry -- the action of a shift in the --

A. Yes, sir.

Q. -- FTIR? Okay.

A shift you said would be a few --

A. Reciprocal centimeters.

Q. -- reciprocal centimeters? I want to call it --

A. CM minus 1, CM to the minus 1, reciprocal centimeters.

Q. I can't say that out loud. I can say CM

to the minus 1, but it's not the same as reciprocal centimeters.

A. Okay.

Q. And then with respect to your opinions on the cross-linked protein-formaldehyde polymer, that is something that occurs after the mesh is placed in formaldehyde, correct?

A. Correct.

Q. Formalin? Is it formalin or formaldehyde?

A. Well, the aqueous solution of formaldehyde is formalin, but formalin is typically buffered to hold it at a consistent pH.

Q. And your report states that the explant samples were preserved in a 10 percent neutral buffered formalin solution; is that right?

A. Yes, sir.

Q. So the cross-linked protein composite can be reversed by the use of heat and water?

A. Yes, sir.

Q. And that's one of the steps in your cleaning process, correct?

A. Yes, sir. It's more than one. It's several.

Q. It's several because you need to -- your cleaning process takes into account that it is

present on the mesh in different areas and that as you shake or move portions of the protein away, you're going to run into some of the --

A. Expose new surface area.

Q. I wanted to ask again -- I'm not sure if I did in this case. But did you run a control -- I already asked that question.

With respect to your opinion on clear and blue flakes associated with Ms. Johnson's mesh, it's your opinion that in one of these SEM photographs after you did your cleaning protocol -- in several, actually, of the SEM photographs you see flakes coming off of the fibers themselves?

A. Both.

Q. Both?

A. Both blue and clear.

Q. So I actually --

A. When you say "flakes coming off," they appear as areas that have released it, adhesion wise, and have broken adhesion from the fiber itself and are more or less sticking out or raised up from the fiber itself. So they look like -- if you would go ahead and break them off, they would be a flake.

Q. And I just want to clear something up. It's my understanding that your opinion is that on

the blue fibers themselves, the flakes do not appear blue. They appear clear; is that correct?

A. They're not blue.

Q. Is that your opinion?

A. Absolutely.

Q. Okay. And when you formed that opinion, did you take into account the nature of the blue fiber itself, that the blue is actually distributed through the fiber and not just on the outside?

A. The entire fiber is blue by virtue of the pigment that is used. And, therefore, if a portion of that fiber lifts up or is cut or something, it will be just as blue as the other portion that it was lifted up or cut from.

And if, for instance, you look at figure 32 in section B, you'll see the proteins that are on the surface and you'll see that the flakes -- or the material that's lost adhesion to the Prolene. In the clear samples, they are translucent to clear. And if you look the blue, it's translucent to clear.

So, therefore, if that were Prolene, with the blue fiber, that would all be blue and they're not. Both the clear fiber material that's losing adhesion to the Prolene fiber and blue material that's lost adhesion to the blue fiber, they are

both translucent or clear in nature, meaning, therefore, that -- and by the way, we've proven that over here with our FTIR spectra, which makes it unequivocal that what you're seeing is proteins and not Prolene.

Q. So you're referring to figure B, 32?

A. I am.

Q. And in figure B, it's your opinion that because the flakes on the blue fiber appear white, that they couldn't possibly be from polypropylene; is that right?

A. Absolutely.

Q. And have you taken into account the refractive index of the blue pigment as associated with the polypropylene in making that opinion?

A. Yes, sir, I sure have.

Q. Where is that?

A. Well, I've taken that into consideration. But refractive indices of the fiber itself is the same as -- would be the same as this flake if it were polypropylene. The refractive indices would only be different if this is not polypropylene. And it's not polypropylene, so it would be different.

Q. But it's not part of the fiber anymore. It's actually jutting out like a potato chip. It's

actually jutting out like --

A. It's not part of the fiber, no, sir.

Q. -- it's a scale on a fish.

A. Therefore, it has to be something other than polypropylene. Because if it were blue, it would be polypropylene, but it's not blue.

Q. It does have a blue hue to it, though, right?

MR. HUTCHINSON: Come on.

THE WITNESS: No, sir, it does not.

BY MR. BOWMAN:

Q. That's the thing. That's what I'm trying to understand.

MR. HUTCHINSON: Excuse me, Counsel. Are you talking about 32B?

MR. BOWMAN: I am.

MR. HUTCHINSON: Note my objection. The reason I'm objecting, just so it's clear, I don't know which fiber you're talking about.

MR. BOWMAN: I'm talking about the blue fibers in 32B.

BY MR. BOWMAN:

Q. And I just wanted to understand that with respect to Ms. Johnson, it's your opinion that this photograph shows conclusive proof that that

material, that white, flaky material on both the clear and the blue fiber could not possibly be polypropylene?

MR. HUTCHINSON: Object to the form.

BY MR. BOWMAN:

Q. Based on the color of it alone?

A. Well, based on -- that is correct. It is not polypropylene based on color, and we've shown that also, but based on FTIR.

Q. Did you try scraping it off?

A. No, sir. We didn't do anything to try to change the orientation or the nature of these at all.

Q. And I say that because in figure C, they're gone. And I assume that that is -- it's obviously a different photograph than figure B, but it's also one more step deeper into the cleaning process.

A. That is correct.

Q. So the material that was there, I assume, is now gone because it's further on in the cleaning process but also --

A. It's water soluble.

Q. It could have been just -- it's just gone?

A. It's gone because it was cleaned off.

That was why -- that was the motivation behind the cleaning process that we put together in the first place.

Q. But in step 2 -- that's really what I'm getting at, is that in step 2 the water soluble -- when you do the analysis after that would show up here on 32B, you've done the distilled water soak. I mean, that's the fifth step. So you did the distilled water soak for an hour with a rinse followed by another rinse. And before that, you had a distilled water bath at 80 degrees Centigrade --

A. You've lost me. You have completely lost me. I'm looking at B. That has nothing to do -- this is after cleaning 1.

Q. Right. That's what I'm looking at here.

A. Well...

Q. So after cleaning 1, there's been at least three steps associated with the cleaning of it. And the first step after cleaning -- for cleaning 1 was distilled water water bath 80 degrees Centigrade, correct?

A. Sure.

Q. Followed by sodium chloride shaker?

A. Okay.

Q. 30 minutes -- 35, 35, 10, I assume that

associates with the mesh themselves?

A. That's right. And this is 1, 8, 1, so it was 35 minutes.

Q. And then a fifth step, distilled water, rinse, soak an hour, rinse?

A. Uh-huh (affirmative response).

Q. And then the sixth step is where you took this photograph?

A. They dried it.

Q. They dried it.

A. Sent it to me.

Q. Sent it to you. And then when it got to you, you took this photograph or had this photograph taken in 32B?

A. That's correct.

Q. So this photograph, it's gone through the wash soak, so there's tissue associated with it. And then it went through another wash soak again?

A. What are you talking about "wash soak"? Let's call it what it is. When you talk about -- let's say it has gone through step 3 or step 4. Let's put down what's here rather than your terminology.

Q. I feel like I said it like four times already, and I can keep doing it.

A. Sure. Let's do it. Steps 3, 4 and 5.

Q. The water bath is step 3. The NaOCl shaker step is step 4. And the distilled water rinse, soak an hour, rinse is step 5.

A. Okay.

Q. So it's already been through all that, and that material is still there?

A. Yes, that's right.

Q. So it would seem to me that, you know, that material, it could be anything. So how can you be sure that it's not polypropylene?

A. What do you mean "anything"? This is an explant that came out of a lady's body, and it's got flesh all over it. We've already identified it has proteins. What do you mean "anything"?

Q. It could be protein. It could polypropylene.

A. Well, that's not anything.

Q. Well, that's my point, is that at this point the analysis showed that there was Amide groups, that there was --

A. Well, these are Amide groups. Look at your FTIR, sir, of this material.

Q. I understand the FTIR that you took, but I don't know that you took it at this spot in B. So

that's my point, is that in B I see these discolorations. And the question I'm getting at is, are you basing your opinion that these flakes are protein based solely on the fact that you believe those fibers are white and not blue?

A. Well, I could base it solely on that fact, but I haven't. I've gone one step farther and run FTIR --

Q. But you didn't run FTIR on --

MR. HUTCHINSON: Excuse me, Counsel.

MR. BOWMAN: I'm going round and round about it.

THE WITNESS: Let me finish my answer, if you would, please.

BY MR. BOWMAN:

Q. I'm listening.

A. Well, I can't hardly think of what I was going to say now that we've had such a disruptive session right there.

I could have used this solely as my only proof that I needed to prove that this was not -- that these flakes are not Prolene. I could have. But in addition to that, we've done farther analyses, and we've taken FTIR analyses, six of them, and we found that we see proteins, and protein

has been washed away in the cleaning process. So we've used both the FTIR supports that these are not Prolene, as well as the color of these two, of these flaking materials, which are, of course, proteins. That's my answer and I'm sticking to it.

Q. My follow-up question would be, did you ever take an FTIR of the image that we see here in 32B?

A. This is far greater than that, sir. What image are you talking about?

Q. 32B.

A. 32B. Did I ever take an FTIR of the image? What image?

Q. The image that we've been talking about the past 20 minutes about --

A. Yeah, we've been talking about it, and I've been telling you that they are microscopically-derived samples. And you're looking at -- this is certainly not a -- we would be taking a spectra of -- we took a spectra of a portion of this, not the entire thing.

Q. So this isn't the whole mesh, right? This is just a photograph of where these flakes were apparent; is that right?

A. No. It's a representative section of the

mesh. If you looked at the whole mesh, the entire mesh would look the same way. But it's a representative section of the mesh. And so, therefore, we then take the photo microscope, run FTIR, bam, take a spot, and here is the FTIR spectra you see back over here that we've looked at.

Q. Wouldn't it be more helpful, though, to actually have an FTIR of where these flakes are?

A. Sir, where the flakes are? They're all over. Yeah, because that's why you get an FTIR spectra over here showing proteins present.

Q. Well, you took pictures of the FTIR where you did -- before the clean mesh was done, but there's no picture of the FTIR for any of these other ones. That's my question.

Wouldn't it have been more helpful for me, from my perspective, to be able to look at this and be convinced that that is not a Prolene and that is protein itself?

MR. HUTCHINSON: Object to form.

Counsel, you're talking about your perspective. The witness has no idea what your perspective is. So I object to form and ask you to rephrase the question.

BY MR. BOWMAN:

Q. I'll rephrase the question.

Wouldn't this be better, scientifically, if you could show to me or anyone that these flakes are, in fact, protein and not polypropylene?

MR. HUTCHINSON: Object to the form. You can answer, Doctor.

THE WITNESS: I have. I've shown you that those flakes are proteins and not polypropylene.

BY MR. BOWMAN:

Q. By telling me that you see something that isn't blue. You see something that is clear instead of blue when it looks like it's blue from here?

A. And I have also taken FTIR spectra to show that proteins are still present on the surface of this material. And so we have proteins present and the spectra of a protein. So I've got proteins present and I've got two materials that are translucent, the same color; one is on a blue and one is on a clear. That's the only conclusion you can draw if you're a scientist.

Q. I understand. But we already established that you didn't take into account what the peer-reviewed literature says about carbonyl shifts with oxidized polypropylene.

A. That's not true. That's not true.
Q. That was your testimony earlier.
A. That was not my testimony earlier.
Q. As I recall --
A. You were talking about shifts of 60 and 80, from one end of the spectra to the other.
Q. That's right.
A. Well, absolutely that does not occur.
Q. What I asked you was did you research it, and you said "no." Isn't that right?
MR. HUTCHINSON: No, no. Dr. Thames, do not answer that.
Counselor, you're badgering the witness. That was absolutely not the question you asked.
MR. BOWMAN: You know what?
MR. HUTCHINSON: And I'm sorry, but it was simply not.
MR. BOWMAN: It's on the record.
MR. HUTCHINSON: I know it is, so I ask that you go back and read it. But it's not the question you asked, and you're asking him about a question you didn't ask and testimony that he didn't give. It's completely objectionable, and it's badgering the witness, and I ask you to stop it right now.

MR. BOWMAN: Whatever the question is pending, I will withdraw it.

MR. HUTCHINSON: Thank you.

BY MR. BOWMAN:

Q. And I will ask you, Doctor, if there is support in the peer review for your opinion that these flakes are protein and not oxidized polypropylene?

A. Not that I'm aware of. I don't think anybody really realizes what's happening here. I think we're the only people that really understand that formaldehyde reacts with proteins, and we've talked about that. None of your people seem to understand that. All of the chemistry was known in 1949. Where are their documents that talk about this?

Q. I am not sure.

A. I just question that, you know. This is something I would be thinking about. Golly-bum, why am I the only guy that knows this chemistry from 1949 is present. It's available for everybody to read.

Q. With respect to your opinions about Ms. Johnson, --

A. Okay.

Q. -- we talked about everything, except for the SEMs. On the SEMs, there are SEMs that you took for every stage of the cleaning process that you performed on each of the three meshes explanted from Ms. Johnson?

A. That is correct.

Q. And it appears that if we look at figure 34, --

A. Figure 34. All right, sir.

Q. -- there is a progression of the mesh becoming -- the fibers of the mesh becoming more visible as your cleaning process is undertaken; is that correct?

A. Well, the overt external flesh is being removed, and now then we see the fibers on -- can actually distinguish the fibers on the surface of Prolene. And by "the fibers," I mean the protein fibers, the proteinaceous material on the surface of Prolene.

Q. Can you see extrusion lines in figure 5 or figure 4?

A. I can see them very clearly in SEM 05. So, yes, they're there, because they are in the very last step and it's very clear.

Q. And it's your opinion that because the

extrusion lines are there, there was no surface degradation of the polymer taking place?

A. That's one of the conclusions. That's another way. The other was the fact that there were no carbonyls by virtue of FTIR and the fact that the translucent materials are proteins and not Prolene.

Q. So, in total, based on the testing that you've done and the analysis that you've done and the fact that you can see extrusion lines, you are led to the conclusion that no surface oxidization took place on the Prolene that was implanted in Ms. Johnson?

THE WITNESS: Would you repeat that question for me, ma'am? I'm sorry to ask you to do that, but it's pretty convoluted.

(COURT REPORTER READS BACK REQUESTED PORTION.)

THE WITNESS: The answer to that is "yes."

BY MR. BOWMAN:

Q. And is that answer true for all three mesh samples that you reviewed for Ms. Johnson?

A. Yes.

MR. BOWMAN: I have no further questions about this case.

(CONCLUDED AT 5:11 P.M.)

CERTIFICATE OF COURT REPORTER

I, Amy M. Key, CSR, and Notary Public in and for the County of Lamar, State of Mississippi, hereby certify that the foregoing pages, under penalty of perjury, contain a true and correct transcript of the testimony of the witness, as taken by me at the time and place heretofore stated, and later reduced to typewritten form by computer-aided transcription under my supervision and to the best of my skill and ability.

I further certify that I placed the witness under oath to truthfully answer the questions in this matter under the power vested in me by the State of Mississippi.

I further certify that I am not in the employ of or related to any counsel or party in this matter, and have no interest, monetary or otherwise, in the final outcome of the proceedings.

Witness my signature and seal this the _____ day of_____, 2016.

_____

AMY M. KEY, CSR

My Commission Expires May 11, 2020

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ACKNOWLEDGMENT OF DEPONENT

I,_____, do hereby certify that I have read the foregoing pages, and that the same is a correct transcription of the answers given by me to the questions therein propounded, except for the corrections or changes in form or substance, if any, noted in the attached Errata Sheet.

_____

SHELBY F. THAMES, PH.D. DATE

Subscribed and sworn
to before me this
_____ day of _____, 20____.
My commission expires:_____

_____
Notary Public